17. The derivative of claim 15, wherein said derivative has at least 95% amino acid identity to said GLP-1 (7-37).

18. A derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), wherein the amino acid sequence of said derivative has the same number of amino acids as said GLP-1 (7-37), and an insulinotropic activity that exceeds the insulinotropic activity of GLP-1 (1-37) and GLP-1 (1-36), and wherein the amino acid sequence of said derivative is that of GLP-1 (7-37) except that an amino acid residue has been substituted with a different amino acid residue.

19. The derivative of claim 18, wherein a hydrophobic amino acid residue of GLP-1 (7-37) has been substituted with a different hydrophobic amino acid residue.

20. The derivative of claim 18, wherein a basic amino acid residue of GLP-1 (7-37) has been substituted with a different basic amino acid residue.

B^2 Cont

21. The derivative of claim 18, wherein an aromatic amino acid residue of GLP-1 (7-37) has been substituted with a different aromatic amino acid residue.

22. A derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), said derivative having the formula:

(1) H_2N-X-CO-R^1

- wherein R^1 is OH, OM, or -N R^2 R^3;

- M is a pharmaceutically acceptable cation or a lower branched or unbranched alkyl group;

- R^2 and R^3 are the same or different and selected from the group consisting of hydrogen and a lower branched or unbranched alkyl group;

- X is a derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), wherein the amino acid sequence of said derivative has the same number of amino acids as said GLP-1 (7-37), and has at least 80% amino acid identity to said GLP-1 (7-37);

- NH_2 is the amine group of the amino terminus of X;

- CO is the carbonyl group of the carboxy terminus of X;

(2) the acid addition salts of (1);

(3) the amino or carboxyl protected form of (1);

(4) a pharmaceutically acceptable carboxylate salt of said peptide;

(5) a pharmaceutically acceptable lower alkyl ester of said peptide; or

(6) a pharmaceutically acceptable amide of said peptide;

wherein said derivative has an insulinotropic activity that exceeds the insulinotropic activity of GLP-1 (1-37) and GLP-1 (1-36).

B2 Cont.

23. The derivative of claim 22, wherein said derivative has at least 90% amino acid identity to said GLP-1 (7-37).

24. The derivative of claim 22, wherein said derivative has at least 95% amino acid identity to said GLP-1 (7-37).

25. A derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), said derivative having the formula:

(1) H_2N-X-CO-R^1

- wherein R^1 is OH, OM, or -N R^2 R^3;

- M is a pharmaceutically acceptable cation or a lower branched or unbranched alkyl group;

- R^2 and R^3 are the same or different and selected from the group consisting of hydrogen and a lower branched or unbranched alkyl group;

- X is a derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), wherein the amino acid sequence of said derivative is that of GLP-1 (7-37) except that an amino acid residue has been substituted with a different amino acid residue;

- NH_2 is the amine group of the amino terminus of X;

- CO is the carbonyl group of the carboxy terminus of X;

(2) the acid addition salts of (1);

B2 cont.

(3) the amino or carboxyl protected form of (1);

(4) a pharmaceutically acceptable carboxylate salt of said peptide;

(5) a pharmaceutically acceptable lower alkyl ester of said peptide; or

(6) a pharmaceutically acceptable amide of said peptide;

wherein said derivative has an insulinotropic activity that exceeds the insulinotropic activity of GLP-1 (1-37) and GLP-1 (1-36).

26. The derivative of claim 25, wherein a hydrophobic amino acid residue of GLP-1 (7-37) has been substituted with a different hydrophobic amino acid residue.

27. The derivative of claim 25, wherein a basic amino acid residue of GLP-1 (7-37) has been substituted with a different basic amino acid residue.

28. The derivative of claim 25, wherein an aromatic amino acid residue of GLP-1 (7-37) has been substituted with a different aromatic amino acid residue.

B2 Cont

29. A method for treating type II diabetes mellitus in a patient in need of such treatment, said method comprising providing the derivative of any one of claims 15-28 to said patient in an amount sufficient to treat said diabetes. --

Remarks

None of the amendments add new matter. Claims 15- 29 are pending.